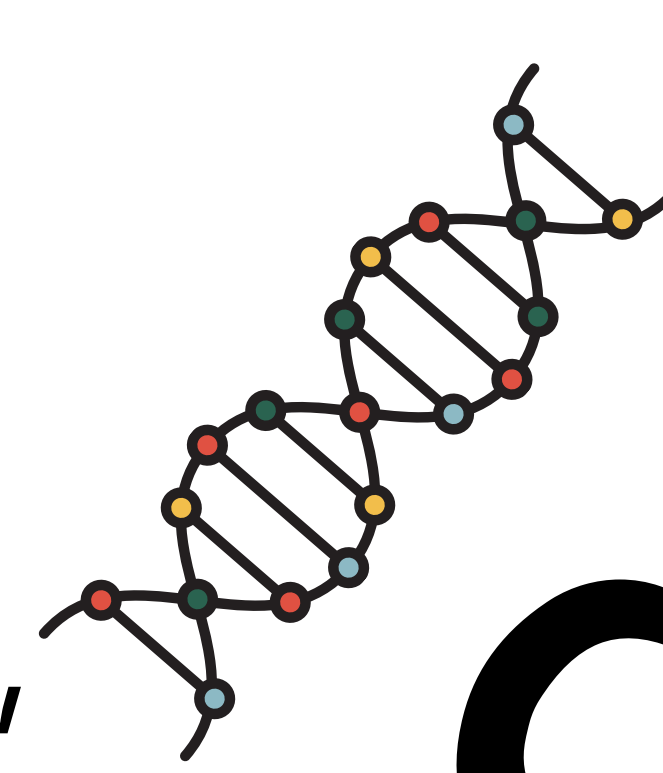


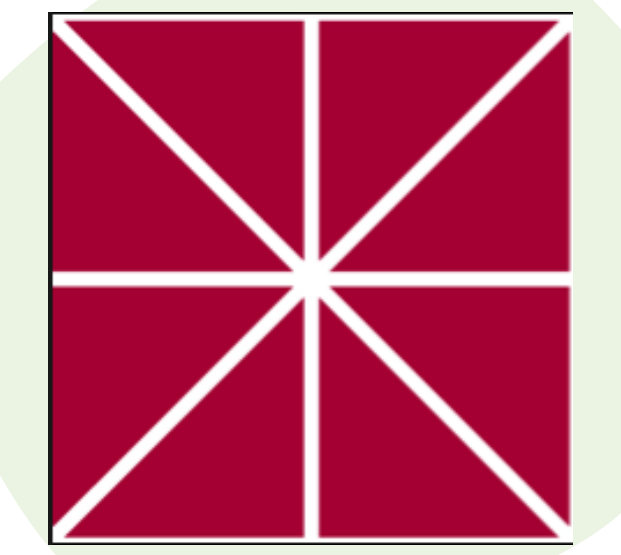
Abstract

Our challenge was to tackle the lack of genetic engineering education within the school systems. New genetic engineering advancements are constantly being made and it is important to be ready when medical issues present themselves. We decided to create a board game that was focused on CRISPR to educate young children. Our board game will educate the younger generation on genetic engineering, specifically CRISPR by allowing them to develop with the idea that genetic engineering is possible. This will open their interest to it in the future as well as allow them to understand what it is in the future.



CRISPR CRISIS

Kayla Anderson & Julie Tran



Conclusions

- Presenting genetic engineering in an easy format to individuals with no prior exposure is a challenge
- Navigated it by consulting both children education and genetic biology experts to incorporate key features
- This tool can be used as a gateway entry to get individuals thinking and learning about CRISPR
- Through further testing, feedback, and pushing our board game, we can increase the general population's knowledge on genetic engineering
- Can help to create better responses for future legislation or procedures that deal with genetic engineering
- Future research could play test in school settings to provide feedback and enhancement features for the game



Introduction

- Created method to educate people about CRISPR
- Allow them to understand what could be done regarding the future of medicine
- Method to genetically modify DNA, specifically that of single gene diseases such as Duchenne's Muscular Dystrophy
 - Uses gRNA and cas9 protein 1
- gRNA guides the cas9 protein to site of mutation to cut the DNA1
 - Homology directed repair (HDR) or NHEJ (Non-homologous end joining) will occur 2
- HDR involves donor DNA while NHEJ is trying to knock out the gene 2



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Results

- Our final product consists of a hands-on board game that allows for users to actively learn about the process of CRISPR as they play
- It is a beginner friendly platform to educate individuals about genetic engineering



Methods

- Created an educational board game for children
- Consulted with experts on CRISPR
- Created a concept for our board game with board game experts
- Consulted with experts on 3D printing as well as electrical engineers
- Created models to reflect our board game
- Created small components such as the manual and worked with graphic designers to assist in the designs



References

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